



Data Taking

2002 September 27 - October 3

- **Dmitri Denisov will be on vacation:**
 - 08:00 Saturday 5 October
 - ↳ 20:00 Saturday 19 October
- **Alan Stone ⇒ Acting Run Coordinator**
 - Pager: 218-8991
- **DØ Collaboration Meeting next week**
 - No Operations Mtg on Fri Oct 11th



Data Taking Statistics

Date	Del. Lumi (nb ⁻¹)	Util. Lumi (nb ⁻¹)	L2/L3 Lost (nb ⁻¹)	Rec. Lumi (nb ⁻¹)	Store (hrs)	Downtime (hrs)	Total Events (k)
27-Sep-02	820	757.8	6.3	493.7	18.6	1.5	1443
28-Sep-02	134.9	124.6	6	41.7	2.2	0.2	52
29-Sep-02	0	0	0	0	0	0	0
30-Sep-02	394.9	371	0.7	276.7	6.6	0.3	631
1-Oct-02	251.1	237.8	0.7	179.4	5.8	0.3	493
2-Oct-02	0	0	0	0	0	0	0
3-Oct-02	3.2	0	0	0	0	0	0
	1604.1	1491.2	13.7	991.5	33.2	2.3	2619

- Total Data Taking Efficiency → 61.8%
 - 62.2 nb⁻¹ or 7.0% Lost due to Downtime (*see next slide*)
 - 598.9 nb⁻¹ or 37.3% Lost due to Deadtime
 - Decorrelated (L2/L3/COOR Disables)
 - Correlated (FEB, SkipNextN)
 - 13.7 nb⁻¹ or 0.9% Lost at L2/L3
- 2619 k Events from Physics Runs (global_CMT-8.30) recorded to tape

We need more tools to understand all the sources of deadtime.



Physics Downtime

Date	Time	Downtime (hrs)	Reason
27-Sep-02	16:14	0.65	SMT Rate Tests
28-Sep-02	0:12	0.2	L1 Muon x18
27-Sep-02	1:25	0.17	Special CAL & SMT Timing Runs
1-Oct-02	5:46	0.15	End of Store 1808. Global Run ended Prematurely
27-Sep-02	22:29	0.15	Begin Store 1797. Run delayed by x18
27-Sep-02	16:55	0.13	End of Store 1795
1-Oct-02	1:24	0.12	Calorimeter Pedestal Download
30-Sep-02	19:28	0.1	Calorimeter Pedestal Download
30-Sep-02	17:26	0.08	Begin Store 1808

- **daqAI did not seem to be running last week**
 - Was not able to summarize the deadtime due to FEB from L2 and Muon readout crates.



Best Runs by Live Fraction

- All readout crates in the run
- No major high voltage or low voltage problems
- Duration greater than 3 hours
- Number of events greater than 300,000
- Rate to tape greater than 25 Hz

Run	Store	Start Time	Delivered Lumi (nb-1)	Initial Lumi (E30)	Shift Crew	Live Fraction	Duration (hrs)	Events	Rate to Tape (Hz)
164095	1756	2002 Sep 15 18:19:15 CDT	168.69	13.11	EVE	91.5%	4.02	401371	27.6
164096	1756	2002 Sep 15 22:21:33 CDT	131.98	10.36	EVE & OWL	90.7%	3.87	404159	28.9
165008	1795	2002 Sep 27 11:08:10 CDT	128.41	9.91	DAY	90.1%	3.89	410984	29.4
164216	1764	2002 Sep 18 07:14:31 CDT	108.73	8.27	OWL & DAY	89.9%	3.99	397478	27.7
164097	1756	2002 Sep 16 02:14:28 CDT	113.70	8.64	OWL	89.7%	3.96	410163	28.7
164213	1764	2002 Sep 18 01:35:04 CDT	130.84	11.11	OWL	88.1%	3.62	399523	30.7
164083	1754	2002 Sep 15 04:15:11 CDT	150.63	10.39	OWL & DAY	86.2%	4.46	433550	27.1
163938	1748	2002 Sep 12 04:16:30 CDT	232.22	18.38	OWL & DAY	85.1%	4.32	508641	36.0
162009	1665	2002 Aug 15 19:07:49 CDT	144.34	13.56	EVE	85.1%	3.75	353318	28.3



Best Runs by Initial Luminosity

Best Runs

Sorted by the Highest Initial Luminosity greater than 20E30.

- All readout crates in the run
- No major high voltage or low voltage problems
- Duration greater than 2 hours
- Number of events greater than 200,000

Run	Store	Start Time	Delivered Lumi (nb-1)	Initial Lumi (nb-1)	Shift Crew	Duration (hrs)	Events	Rate to Tape (Hz)
164605	1787	2002 Sep 24 06:17:29 CDT	333.91	28.14	OWL & DAY	4.02	401371	27.6
164537	1781	2002 Sep 23 03:32:36 CDT	188.16	26.67	OWL	2.20	282149	35.6
163972	1750	2002 Sep 13 01:34:17 CDT	318.54	23.70	OWL	4.37	445097	28.3
163118	1668	2002 Sep 02 00:07:48 CDT	180.94	22.72	OWL	2.49	246950	27.5
163084	1713	2002 Aug 31 20:46:19 CDT	198.44	22.48	EVE	2.75	322932	32.6
160686	1594	2002 Jul 28 17:55:57 CDT	246.72	21.74	EVE	4.06	458431	31.38
164539	1781	2002 Sep 23 06:01:31 CDT	270.40	21.31	OWL & DAY	3.99	351777	24.5
162624	1691	2002 Aug 26 10:26:58 CDT	140.82	20.80	DAY	2.03	312470	42.3
163171	1723	2002 Sep 02 20:10:59 CDT	233.93	20.76	EVE	3.69	440644	33.2
162064	1668	2002 Aug 17 14:09:17 CDT	132.01	20.45	DAY & EVE	2.08	225134	29.8



Best Days by Recorded Luminosity

Best Day

Sorted by Recorded Luminosity.

- Recorded luminosity greater than 500 nb⁻¹
- Recorded events greater than 1000k

Stores	Date	Delivered Lumi (nb ⁻¹)	Recorded Lumi (nb ⁻¹)	In Store (hrs)	Events (in k)	Rate to Tape (Hz)
1754, 1756	2002 Sep 15	823.9	717.3	21.2	2076	27.8
1787	2002 Sep 24	1036.9	581.0	17.8	1251	22.3
1770	2002 Sep 20	856.0	575.5	21.8	1800	23.7
1750, 1752	2002 Sep 13	1068.2	560.8	19.8	1443	23.8
1687, 1689	2002 Aug 25	884.4	539.6	21.1	1848	26.3
1752, 1754	2002 Sep 14	786.4	508.3	18.4	1480	23.1
1711, 1713	2002 Aug 31	943.9	505.6	20.4	1774	27.2
1507	2002 Jul 8	674.9	505.1	19.9	1947	27.6
1737	2002 Sep 8	694.4	504.4	15.5	1410	26.0
1748	2002 Sep 12	727.4	500.2	15.7	1377	26.3



Plans for Upcoming Week

- New trigger list: global_CMT-8.40
 - Scheduled for next store (this afternoon?)
 - Should see drop in event size
- Beam studies next week
 - Will know more after Monday morning Beams Division Mtg > 10am
 - Should expect the “standard” 5 shifts from the day shift on Tuesday
- Adding more L3 nodes (*more from Gordon*)
- Installing new PCs (*more from Stu*)